



PLAINS FACTS

EDITION 19 SUMMER 2017

CORANGAMITE WATER SKINK (*EULAMPRUS TYMPANUM*)



STOCK EXCLUSION FENCING TO PROTECT STONEY RISES WOODLAND

VICTORIAN VOLCANIC PLAINS BIODIVERSITY GRANTS

In 2015/16 the Corangamite CMA, with assistance from the Australian Government, delivered the first round of the VVP Biodiversity grants program. The objective of the program is to support community and landholder involvement in protecting, enhancing or promoting Victorian Volcanic Plains and the Western

District Lakes biodiversity assets with a focus on on-ground outcomes and community engagement.

Of the 22 applications, ten projects were successful in receiving a total of \$52,670 funding. The on-ground projects included eight private landholders covering an area of 65 hectares protecting a range of assets including remnant native vegetation,

natural wetlands and threatened species (Corangamite Water Skink). The on-ground projects consisted of weed management, stock exclusion fencing, supplementary planting and rabbit control. The engagement projects included two community groups and involved a tour of roadsides with native grasslands and production of a community newsletter.





PHOTOGRAPH: STEVE BOURNE

VICTORIA'S BROLGAS

GENETIC STUDY REVEALS NEW PRELIMINARY INSIGHTS INTO THE POTENTIAL UNIQUENESS OF VICTORIA'S BROLGA POPULATION

The Brolga (*Antigone rubicunda*) is an iconic crane species in our landscape, creating an evocative image as pairs dance together at dawn and dusk around our local wetlands. The species has a broad distribution including the far north and southeast of Australia. However, over the last three decades the brolga populations in south eastern Australia have declined severely primarily as a result of widespread drainage of wetland habitats for agriculture. Predation by foxes, and mortality from powerline and fence collisions are recognised as additional threats, with disturbance and collision risk from wind farm infrastructure being a more recent concern. In Victoria it is estimated that only 200-250 nesting pairs remain, leading to its listing as vulnerable under the *Victorian Flora and Fauna Guarantee Act* (1988).

There is an increasing need for the incorporation of key biological and ecological information on *A. rubicunda* to help guide future conservation management, including the restoration of key brolga habitat, and minimising risks associated with land-use activities in Victoria. Thanks to generous public

donations and funding from the Glenelg Hopkins Catchment Authority, Dr Adam Miller (Nature Glenelg Trust and Deakin University) and Inka Veltheim (Federation University and The University of Melbourne) have partnered with a team of researchers from Charles Darwin University, University of Greifswald, and Monash University to undertake a genetic analysis of Australia's brolga populations.

Genetic studies are used widely to guide wildlife management, providing insights into patterns of population connectivity, factors contributing to population fitness and resilience to environmental pressures (i.e. levels of genetic diversity and inbreeding), and baseline data for monitoring population health. Estimates of population genetic structure can in turn be used as an effective spatial framework for identifying and prioritising the conservation and restoration of key local habitats.

In a report released to the public in November 2016, the team of researchers announced the completion of the first phase of the genetic study,

which included the development of much needed genetic protocols for future population genetic analyses, and some preliminary findings that have sparked public interest.

Historically there has been some conjecture about the degree of connectivity between northern and south-eastern Australian Brolga populations, and even if these represent the same species. Based on new genetic data the team has confirmed that these populations are likely to represent the same species and share a recent common ancestor. However, preliminary analyses suggest that contemporary population connectivity between south-eastern and northern Australian populations could be limited. If these findings are true then it can be expected that Victoria's declining Brolga population is unlikely to be supplemented via the immigration of birds and genes from the northern reaches of the continent. The potential self-recruiting nature of the Victorian population emphasizes its potential

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vulnerability to negative demographic factors such as inbreeding, and stochastic processes that tend to compromise small wildlife populations.

However, the team of researchers has recommended that while these findings provide some interesting early insights they should be treated with caution due their preliminary nature. Further investment and sampling effort, including the analysis of genetic samples across the entire species range, is needed to gain a more reliable estimate of connectivity between

Brolga populations. The team has been overwhelmed by public support for the project so far, having received more than \$15,000 in donations over the last 12 months. To complete the project the team are looking to raise a further \$30,000, with tax-deductible donations able to be made via the Nature Glenelg Trust website (<http://natureglenelg.org.au/donate/>).

Outputs from this study are expected to provide conservation and land managers and policy makers with a resource for guiding conservation planning, and

adequately gauging the risks associated with future proposed land-use change in south-eastern Australia. If you are interested to read further about this study you can access the final report for the first phase of the genetics project on the Nature Glenelg Trust website (<http://natureglenelg.org.au/ngt-preliminary-assessment-of-brolga-genetics-final-for-public-release-3rd-nov-2016/>). A more detailed scientific manuscript was submitted for peer-reviewed publication in the international Journal of Heredity in November.

GREEN ARMY ON THE VICTORIAN VOLCANIC PLAINS

Nickolas Bouma

The Green Army is an Australian Government initiative open to young Australians aged 17-24 years to gain training and experience in environmental and heritage conservation fields.

A local Green Army project is titled 'Increase biodiversity outcomes on the Victorian Volcanic Plains'. The Victorian Volcanic Plains is a national biodiversity hotspot and one of the most threatened habitats in Australia, with more than 25 nationally threatened flora and fauna species. This project is conducted in partnership with Conservation Volunteers Australia and Greening Australia.

"The best aspect to this project is that it seeks to achieve real and practical environmental outcomes through a variety of activities including community participation and engagement events, fencing, pest survey & assessment, plant propagation, revegetation, seed collection, and weed survey & assessment. These

are being achieved at a large variety of locations from private landholdings, reserves, cemeteries, old quarry sites and the Geelong Botanical Gardens. We have been exposed to beautiful sites in a fantastic year for grassland flowers" said Nick Bouma (Green Army Supervisor)

"Having the opportunity to be a Green Army participant has been an extremely rewarding experience. Being able to undertake such hands on tasks with great environmental benefits and being able to see real results throughout the project has been one of the highlights. Working in such beautiful remnant grasslands, watching the wild flowers open and see the wildlife that resides there, has really opened our eyes to the importance of protecting the flora and fauna within these special areas" Kate Martin (Green Army Participant)

"This has been one of the most enjoyable and rewarding jobs I've had. Being able to work outside and have such a positive impact on my local environment has been incredibly empowering and makes me want to continue in this field. This job has also been incredibly useful for me to build on skills like plant identification, teamwork and organisation." Oscar Nitz, (Green Army Participant)

The Green Army will deliver tangible benefits for the environment and Australia's heritage and provide young people with skills, training and experience to help them enter the workforce or improve their career opportunities.

If your organisation would like to know more or host a future green army please contact Conservation Volunteers on 03) 5221 0300





IMPORTANT CHANGES TO THE VICTORIAN ABORIGINAL HERITAGE ACT 2006

The Aboriginal Heritage Amendment Act 2016 (the Amendment Act) establishes new provisions and changes to the Aboriginal Heritage Act 2006. These amendments came into force August 1st 2016 and breaches of the act can result in prosecution.

The purpose of the act is the protection of tangible and intangible Aboriginal heritage, empowerment of Traditional Owners as protectors of cultural heritage for all Aboriginal people, strengthening relationships of Traditional Owners with their Country and promoting respect for Aboriginal cultural heritage.

It is advised that people conducting on-ground works and/or working within culturally sensitive areas seek advice on how to comply with the act. For further information contact Aboriginal Victoria,

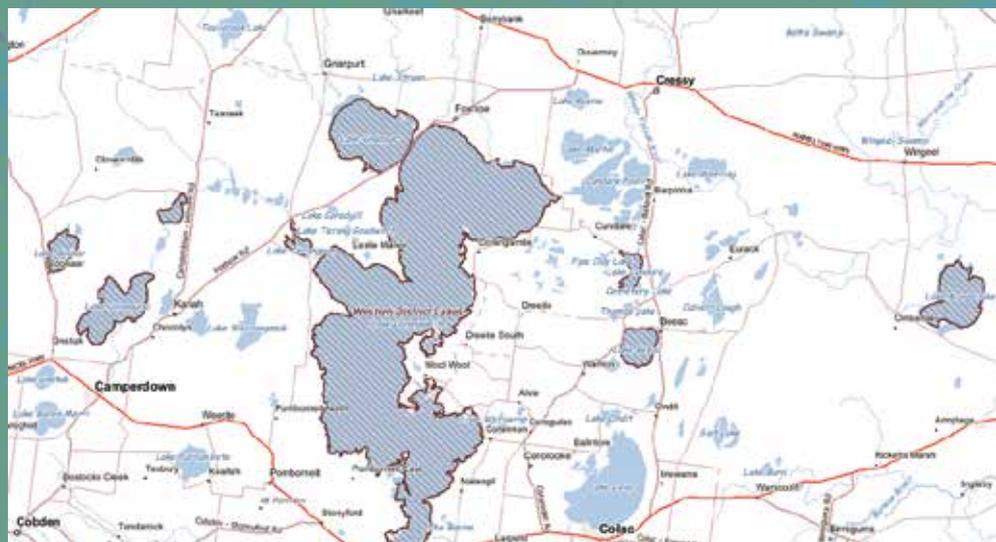
Webpage: <http://www.vic.gov.au/aboriginalvictoria/heritage/aboriginal-heritage-act-2006-and-2016-amendment.html> , Email: Aboriginal.Heritage@dpc.vic.gov.au , Ph: 1800 762 003.



RECRUITING FOR WATERWATCH MONITORS RAMSAR LAKES AND THE VICTORIAN VOLCANIC PLAINS

In 2011 as part of Greening Australia borrell-a-kandelop project 9 sites on Western District Ramsar lakes were monitored monthly by Corangamite Waterwatch for water quality and macroinvertebrate data. This data was of great importance to land managers working in this internationally significant area but unfortunately the funding and water dried up and no monitoring of these sites has occurred since 2014. The good news is now the Lakes are filling we are wanting to resume monitoring. Corangamite Waterwatch

will provide you with all necessary water testing equipment and training to undertake monthly water quality monitoring. So please have look at the map of RAMSAR and Important wetlands sites and contact Kristen Lees kristen.lees@ccma.vic.gov.au if you would like to join the team. Check out Waterwatch Victoria's new web portal for all Waterwatch water quality data and a full explanation of this wonderful Citizen Science program www.vic.waterwatch.org.au.



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